

WHAT IS CLAIMED IS:

1. A storage system for storing an original file and at least one format converted file of the original file comprising:
  - a storage media; and
  - a file conversion unit which, in response to a request to store an original file, converts the original file to at least one format converted file, wherein said storage system stores the original file and the at least one format converted file on said storage media and manages a relationship between the original file and the format converted file to permit retrieval of either of the original file and the format converted file.
2. A storage system according to claim 1, wherein the relationship between the original file and the format converted file is managed by a table which includes at least information of formats to which the original file is converted.
3. A storage system according to claim 2, wherein said table includes a directory of a location of the original file and the format converted file.
4. A storage system according to claim 1, wherein said file conversion unit is external of said storage system.

5. A storage system according to claim 1, wherein said file conversion unit calculates a hash value of the original file and the format converted file, and

wherein said hash value is used to determine whether the original file or the format converted file has changed.

6. A storage system according to claim 5, wherein a directory list is maintained indicating a corresponding relation between the original file, formats to which the original file has been converted, information based on hash checks indicating whether the original file or the format converted file has changed, and information indicating a status of the change.

7. A storage system according to claim 1, wherein a file can be read by specifying a file format.

8. A storage system according to claim 1, wherein a file can be stored at different locations on said storage media, on other storage media, or on other storage media of a remote storage system which can be accessed via a network based on a format of said file based on a format of said file or a directory in which files are located.

9. A storage system according to claim 8, wherein storing of a file based on its format is conducted based on a file storing rule.

10. A storage system according to claim 1, wherein a list of formats a file is stored in can be obtained.

11. A method of storing an original file and at least one format converted file of the original file in a storage system which includes a storage media, said method comprising the steps of:

in response to a request to store an original file, converting the original file to at least one format converted file;

storing the original file and the at least one format converted file on the storage media; and

managing a relationship between the original file and the format converted file to permit retrieval of either of the original file and the format converted file.

12. A method according to claim 11, wherein the relationship between the original file and the format converted file is managed by a table which includes at least information of formats to which the original file is converted.

13. A method according to claim 12, wherein said table includes a directory of a location of the original file and the format converted file.

14. A method according to claim 11, wherein a file conversion unit performs the converting and said file conversion unit is external of said storage system.

15. A method according to claim 11, wherein a file conversion unit performs the converting and said file conversion unit calculates a hash value of the original file and the format converted file, and

wherein said hash value is used to determine whether the original file or the format converted file has changed.

16. A method according to claim 15, wherein a directory list is maintained indicating a corresponding relation between the original file, formats to which the original file has been converted, information based on hash checks indicating whether the original file or the format converted file has changed, and information indicating a status of the change.

17. A method according to claim 11, wherein a file can be read by specifying a file format.

18. A method according to claim 11, wherein a file can be stored at different locations on said storage media or on other storage media based on a format of said file.

19. A method according to claim 18, wherein storing of a file based on its format is conducted based on a file storing rule.

20. A method according to claim 11, wherein a list of formats a file is stored in can be obtained.

21. A system comprising:

a storage system which includes a storage media for storing files; and

a file conversion unit, which is connected to said storage system and

which in response to a request to store an original file, converts the original

file to at least one format converted file,

wherein said storage system stores the original file and the at least one

format converted file on said storage media and manages a relationship

between the original file and the format converted file to permit retrieval of

either of the original file and the format converted file.

22. A system according to claim 21, wherein the relationship

between the original file and the format converted file is managed by a table

which includes at least information of formats to which the original file is

converted.

23. A system according to claim 22, wherein said table includes a

directory of a location of the original file and the format converted file.

24. A system according to claim 21, wherein said file conversion unit

is external of said storage system.

25. A system according to claim 21, wherein said file conversion unit

calculates a hash value of the original file and the format converted file, and

wherein said hash value is used to determine whether the original file or the format converted file has changed.

26. A system according to claim 25, wherein a directory list is maintained indicating a corresponding relation between the original file, formats to which the original file has been converted, information based on hash checks indicating whether the original file or the format converted file has changed, and information indicating a status of the change.

27. A system according to claim 21, wherein a file can be read by specifying a file format.

28. A system according to claim 21, wherein a file can be stored at different locations on said storage media or on other storage media based on a format of said file.

29. A system according to claim 28, wherein storing of a file based on its format is conducted based on a file storing rule.

30. A storage system according to claim 21, wherein a list of formats a file is stored in can be obtained.